Office of Environmental Health Hazard Assessment

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MEMORANDUM

Winston H. Hickox
Agency Secretary

Gray Davis
Governor

TO: Charles M. Andrews, Chief
Worker Health and Safety Branch
Department of Pesticide Regulation
P.O. Box 4015
Sacramento, California 95812-4015

FROM: Anna M. Fan, Ph.D., Chief
Pesticide and Environmental Toxicology Section

DATE: April 23, 2002

SUBJECT: CONCURRENCE - REPLY TO "REQUEST TO PARTICIPATE IN THE DEVELOPMENT OF PROPOSED METHYL BROMIDE FIELD FUMIGATION EMERGENCY REGULATIONS"

The Office of Environmental Health Hazard Assessment (OEHHA) has reviewed the Department of Pesticide Regulation's (DPR) proposed emergency regulations for methyl bromide field fumigation to repeal and readopt Sections 6450, 6450.1, 6450.2, 6450.3, 6784(b), and two definitions in Section 6000 pursuant to Food and Agriculture Code Section 12981. The purpose of this proposed action is to provide an immediate and effective mechanism to implement appropriate mitigation measures to protect the public and workers from acute (short-term) methyl bromide exposure hazards.

OEHHA offers concurrence with DPR's emergency regulations as proposed. We support these regulations to maintain continuity and to ensure continued protection of the health and safety of workers and the public when methyl bromide is used for field fumigation.

Thank you for providing the opportunity for OEHHA to review DPR's proposed emergency regulations for methyl bromide field fumigation.

If you have further questions, please call me or Dr. Richard Ames at (510) 622-3170.

cc: See next page

cc: Val F. Siebal
Chief Deputy Director
Office of Environmental Health Hazard Assessment

George V. Alexeeff, Ph.D., D.A.B.T.
Deputy Director for Scientific Affairs
Office of Environmental Health Hazard Assessment

Richard Ames, Ph.D., M.P.H., Chief
Pesticide Epidemiology Unit
Pesticide and Environmental Toxicology Section
Office of Environmental Health Hazard Assessment

dpr

Department of Pesticide Regulation

Paul E. Helliker
Director

Gray Davis
Governor

Winston H. Hickox
Secretary, California Environmental Protection Agency

MEMORANDUM

TO: Anna M. Fan, Ph.D., Chief
Pesticide and Environmental Toxicology Section
Office of Environmental Health Hazard Assessment
1515 Clay Street, 16th Floor
Oakland, California 94612

FROM: Chuck Andrews, Chief
Worker Health and Safety Branch
(916) 445-4260

DATE: April 19, 2002

SUBJECT: REQUEST TO PARTICIPATE IN THE DEVELOPMENT OF PROPOSED METHYL BROMIDE FIELD FUMIGATION EMERGENCY REGULATIONS

The Department of Pesticide Regulation (DPR) proposes to file emergency regulations to repeal and readopt sections 6450, 6450.1, 6450.2, 6450.3, 6784(b), and two definitions in section 6000. The purpose of this proposed action is to provide an immediate and effective mechanism to implement appropriate mitigation measures to protect the public and workers from acute (short-term) methyl bromide exposure hazards.

On April 8, 2002, San Francisco Superior Court Judge James Robertson rendered a decision on the two consolidated lawsuits filed against DPR. The judge ruled that DPR did not adequately consult with CDFA on the development of the regulations, and in his order, the judge voided the regulations. However, he issued a 45-day stay to allow the Department to "consider implementing replacement regulations, in such a form as DPR deems appropriate." Before the 45-day stay expires, DPR needs to put into place emergency regulations that are the same as those now in effect. For over a year, DPR has worked with growers, industry, and public interest groups on implementing the current regulations. It is necessary to readopt these regulations as emergency regulations to maintain continuity and to ensure continued protection of the health and safety of workers and the public when methyl bromide is used for field fumigation.

The development of worker safety regulations is the joint and mutual responsibility of DPR and Office of Environmental Health Hazards Assessment (OEHHA). DPR is requesting OEHHA participation in the development of the proposed regulatory changes to repeal and readopt sections 6450, 6450.1, 6450.2, 6450.3, 6784(b), and two definitions in section 6000 pursuant to Food and Agricultural Code section 12981. Attached for your review is a copy of the Draft Finding of Emergency and Proposed Text. We would appreciate receiving a response whether you concur with these proposed regulatory changes by April 24, 2002.

Laurie Bliss - Re: Fwd: Methyl Bromide Emergency Regulations

From: George Alexeeff
To: Fan, Anna
Date: 4/23/2002 1:37 PM
Subject: Re: Fwd: Methyl Bromide Emergency Regulations
CC: Bliss, Laurie; Hernandez, Edna

I reviewed the memo and it is fine.

George V. Alexeeff, Ph.D., D.A.B.T.
Deputy Director for Scientific Affairs
Office of Environmental Health Hazard Assessment
Cal/EPA
email: galexeef@oehha.ca.gov
Oakland phone: (510) 622-3202
Sacramento phone: (916) 322-2067

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.

>>> Anna Fan 04/19/02 01:00PM >>>
fyi

If you need additional information or have any questions about this request, please contact Charlene Martens from my staff at (916) 445-4261. If you have any questions about the content of the regulations, please contact me. Thank you for your assistance in this matter.

Attachments

cc: Charlene Martens, WH&S Branch
Fred Bundock, Office of Legislation and Regulation
Richard G. Ames, Ph.D., MPH, OEHHA

DRAFT

EMERGENCY REGULATION
DEPARTMENT OF PESTICIDE REGULATION

TITLE 3. FOOD AND AGRICULTURE
Methyl Bromide Field Fumigation

FINDING OF EMERGENCY

The Department of Pesticide Regulation (DPR) finds that an emergency exists and that the adoption of these regulations are necessary for the immediate preservation of the public peace, health and safety, or general welfare.

INFORMATIVE DIGEST

Methyl bromide is a pesticide commonly used in agriculture. Methyl bromide is a gaseous fumigant used to treat soil before planting vegetable, fruit and nut crops, and flower and forest nurseries. Depending on the crop, field applications may occur annually, or once every several years. Methyl bromide is injected into the soil with specialized application equipment that lays tarpaulins over the ground to minimize off-gassing for several days. After harvest, methyl bromide fumigation protects crops from pest damage during storage and transportation. The fumigant is also used for quarantine pest control, termite eradication in homes and other structures, and to control insects in mills, ships, railroad cars, and other transportation vehicles.

Methyl bromide exposure may produce harmful effects on people and the environment. Exposure results from inhalation or absorption through the skin. Despite its ability to cause harmful effects to humans and its classification by the federal government as an ozone-depleting substance, methyl bromide still remains one of the most widely used pesticides in the world due to its outstanding efficacy and the lack of effective alternatives.

Methyl bromide is listed as a restricted material in Title 3, California Code of Regulations (3 CCR) section 6400(d). Possession and use of methyl bromide for agricultural production purposes is allowed only under a permit from the local county agricultural commissioner (CAC). Before issuing a permit, the CAC must evaluate the permit application to determine whether the intended use will cause environmental harm. Depending on the results of this review, the CAC may deny the permit or impose permit conditions including the use of specified mitigation measures. In evaluating permit applications, CACs must consider and, where appropriate, use information provided by DPR. For methyl bromide, DPR provides this information as suggested permit conditions. The suggested permit conditions represent minimum mitigation measures based on DPR's analysis of available data. CACs can impose more stringent mitigation measures dictated by the environmental conditions at the application site.

3 CCR contains regulations pertaining to the field fumigation use of methyl bromide. In late 2000, DPR adopted regulations focused upon mitigating possible acute (short-term) methyl bromide exposure hazards to the public and agricultural employees. Suggested permit conditions

formed the foundation upon which the regulatory action was based. The regulatory action amended sections 6450 (Chloropicrin and Methyl Bromide-Field Fumigation) and 6784 (Field Fumigation), and added sections 6450.1 (Notification Requirements), 6450.2 (Buffer Zone Requirements), and 6450.3 (Fumigation Methods). In addition to amending use restrictions and general safe-use requirements for field fumigations, new provisions that were not contained in suggested permit conditions were added. These provisions include submission of a worksite plan at the time a property operator applies for a restricted materials permit, notification to neighboring property operators prior to a fumigation, extra protection for children in schools, establishment of minimum buffer zones, and new limits on work hours for fumigation employees. The regulatory action was approved by the Office of Administrative Law, and the regulations became effective on January 14, 2001.

DPR adopted emergency regulations on June 27, 2001 to amend sections 6450.2 and 6450.3(a)(1)(C)2 to provide an immediate and effective mechanism to implement appropriate mitigation measures to protect workers from acute methyl bromide exposure hazards. The regulations that became effective on January 14, 2001 had prohibited inner buffer zones from extending onto public roadways. However, DPR determined the minimal methyl bromide exposure to people traveling along roads did not warrant the restrictions. The impact of this restriction resulted in agricultural acreage being divided into smaller application blocks to be treated over several days over a longer period of time. By increasing the number of field fumigations, fumigation handlers were potentially at greater risk of acute methyl bromide exposure hazards due to the increased need to disassemble application equipment prior to transporting the equipment to the next application site. The emergency regulations allowed the inner buffer zone to extend into public roadways upon commissioner approval and corrected an improper application equipment configuration. The emergency regulations were readopted on October 25, 2001.

On February 22, 2002, DPR filed the certificate of compliance with the Office of Administrative Law to make the emergency regulations permanent. These regulations became effective on April 8, 2002. That regulatory action also amended section 6784(b) exempting employees involved in fumigation-handling activities from maximum work-hour restrictions if National Institute for Occupational Safety and Health (NIOSH)-certified respiratory protection specifically recommended for use in atmospheres containing less than five parts per million methyl bromide is worn for the entire duration of the fumigation-handling activities. Like the regulations that became effective on January 14, 2001, these regulations focused on mitigating possible acute (short-term) methyl bromide exposure hazards to the public and agricultural employees.

SPECIFIC FACTS SHOWING NEED FOR IMMEDIATE ACTION

In early 2001, the Ventura County Agricultural Association filed a lawsuit against DPR arguing that DPR did not consult adequately with the California Department of Food and Agriculture (CDFA) during the development of the methyl bromide field fumigation regulations, which became effective on January 14, 2001, as required by law. Also, a separate suit by the Environmental Defense Center and California Rural Legal Assistance also challenged the methyl bromide regulations on a variety of issues. The suits were later consolidated.

On April 8, 2002, San Francisco Superior Court Judge James Robertson rendered a decision on the two consolidated lawsuits filed against DPR. The judge ruled that DPR did not adequately consult with CDFA on the development of the regulations, and in his order, the judge voided the regulations. However, he issued a 45-day stay to allow the Department to "consider implementing replacement regulations, in such a form as DPR deems appropriate." The judge declined to rule on the claims of the Environmental Defense Center/California Rural Legal Assistance suit "on the grounds that they are moot." A copy of the judge's order is attached.

Although DPR disagrees with the judge's ruling that it failed to consult adequately with CDFA before finalizing the methyl bromide regulations that became effective on January 14, 2001, in the interest of expediency, DPR decided not to appeal the ruling.

In staying the order for 45 days, the Court recognized the importance of continuing the regulatory program through emergency regulations. Therefore, before the 45-day stay expires, DPR needs to put into place emergency regulations that are the same as those now in effect. DPR seeks to repeal, and readopt sections 6450, 6450.1, 6450.2, 6450.3, 6784(b), and two definitions in section 6000 to provide an immediate and effective mechanism to implement appropriate mitigation measures to protect the public and workers from acute (short-term) methyl bromide exposure hazards. For over a year, DPR has worked with growers, industry, and public interest groups on implementing the current regulations. It is necessary to readopt these regulations as emergency regulations to maintain continuity and to ensure continued protection of the health and safety of workers and the public when methyl bromide is used for field fumigation.

DPR will begin the process of permanently adopting the emergency regulations. Before noticing the proposed regulations for public comment, DPR will formalize its consultation with CDFA.

AUTHORITY

This regulatory action is being taken pursuant to authority vested by Food and Agricultural Code (FAC) sections 11456, 12976, 12981, 14005, 14102, and 11502.

REFERENCE

This regulatory action implements, interprets, or makes specific FAC sections 11501, 12981, 14006, and 14102.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

DPR has determined that the proposed regulatory action does not impose a mandate on local agencies or school districts, nor does it require reimbursement by the State pursuant to Part 7 (commencing with section 17500) of Division 4 of the Government Code because the regulatory action does not constitute a new program or higher level of service of an existing program within the meaning of section 6 of Article XIII B of the California Constitution. DPR has also determined that no nondiscretionary costs or savings to local agencies or school districts will result from the proposed regulatory action.

CACs are the local agencies responsible for enforcing the regulations. DPR anticipates that there will be no fiscal impact to these agencies because CACs will be following the same restricted materials permit evaluation process that is currently performed. Processing permit applications falls under the current pesticide enforcement program that includes a negotiated work plan. DPR negotiates with the CACs an annual work plan for enforcement activities. DPR and the CACs use the work plan to prioritize and plan pesticide enforcement activities for the coming year. The work plan allows flexibility in evaluating pesticide enforcement activity needs, establishing priority pesticide enforcement activities, and if needed, redirecting CACs' pesticide enforcement resources.

COSTS OR SAVINGS TO STATE AGENCIES

DPR has determined that no savings or increased costs to any State agency will result from this regulatory action.

EFFECT ON FEDERAL FUNDING TO THE STATE

DPR has determined that no effect on federal funding to the State will result from this regulatory action.

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TEXT OF EMERGENCY REGULATIONS

Current wording is indicated by regular type.
Originally proposed deletions are indicated by ~~strikeout~~.
Originally proposed additions are indicated by underline.

DIVISION 6. PESTICIDES AND PEST CONTROL OPERATIONS
CHAPTER 1. PESTICIDE REGULATORY PROGRAM
SUBCHAPTER 1. DEFINITION OF TERMS
ARTICLE 1. DEFINITIONS FOR DIVISION 6

Amend section 6000 by repealing the following definitions:

6000. Definitions.

. . .

~~**"Application block"** means a field or portion of a field treated in a 24-hour period that typically is identified by visible indicators, maps, or other tangible means.~~

~~**"Buffer zone"** means an area that surrounds a pesticide application block in which certain activities are restricted for a specified period of time to protect human health and safety from existing or potential adverse effects associated with a pesticide application.~~

. . .

NOTE: Authority cited: Sections 11456, 11502, 12111, 12781, 12976, 12981, and 14005, Food and Agricultural Code. Reference: Sections 11408, 11410, 11501, 11701, 11702(b), 11704, 11708(a), 12042(f), 12103, 12971, 12972, 12973, 12980, 12981, 13145, 13146, and 14006, Food and Agricultural Code.

Amend section 6000 by readopting, in alphabetical order, the following definitions:

6000. Definitions.

. . .

"Application block" means a field or portion of a field treated in a 24-hour period that typically is identified by visible indicators, maps, or other tangible means.

"Buffer zone" means an area that surrounds a pesticide application block in which certain activities are restricted for a specified period of time to protect human health and safety from existing or potential adverse effects associated with a pesticide application.

. . .

NOTE: Authority cited: Sections 11456, 11502, 12111, 12781, 12976, 12981, and 14005, Food and Agricultural Code. Reference: Sections 11408, 11410, 11501, 11701, 11702(b), 11704, 11708(a), 12042(f), 12103, 12971, 12972, 12973, 12980, 12981, 13145, 13146, and 14006, Food and Agricultural Code.

CHAPTER 2. PESTICIDES
SUBCHAPTER 4. RESTRICTED MATERIALS
ARTICLE 4. USE REQUIREMENTS

Repeal section 6450:

~~**6450. Chloropicrin and Methyl Bromide Field Fumigation.**~~

~~The provisions of this section and sections 6450.1, 6450.2, 6450.3, and 6784(b) pertain to field soil fumigation use requirements using methyl bromide, singly or in combination with chloropicrin or any other pesticide or warning agent. For purposes of these sections, field soil fumigation does not apply to golf courses, tree holes, potting soil, raised tarpaulin nursery fumigations of less than one acre, and greenhouses and other similar structures.~~

~~(a) Notwithstanding section 6428, the operator of the property to be treated shall submit a proposed worksite plan to the commissioner for evaluation at least 7 days prior to submitting a notice of intent. The proposed worksite plan shall include, but is not limited to, method of application to be used, acreage and identification of each application block to be treated, application rate to be used, description of the notification procedure to property operators pursuant to section 6450.1(b), description of any activities within the buffer zone(s) as specified in section 6450.2(e) and (f), and if applicable, description of the tarpaulin repair response plan, and tarpaulin removal. The commissioner shall retain the proposed worksite plan for one year after the expiration of the permit.~~

~~(b) The commissioner, pursuant to section 6432, shall evaluate local conditions and the proposed worksite plan.~~

~~(c) The commissioner shall include at least the following when conditioning a permit: the buffer zone requirements, work hour restrictions, notification requirements, any other restrictions to address local conditions, and if applicable, description of the tarpaulin repair response plan and tarpaulin removal. The commissioner shall complete the evaluation and complete conditioning the permit prior to the submission of the notice of intent.~~

~~(d) An application block shall not exceed 40 acres.~~

~~(e) Tarpaulins shall have a permeability factor between 5 and 8 milliliters methyl bromide per hour, per square meter, per 1,000 parts per million of methyl bromide under the tarpaulin at 30 degrees Celsius, and be approved by the Department. A list of approved tarpaulins is available from the Department.~~

~~(f) Tarpaulins shall be buried under at least four inches of firmly packed soil at the end of the rows. The tarpaulins shall remain in place for the time specified in section 6450.3.~~

~~(g) Fumigation equipment shall be operated to eliminate pesticide drip by clearing the fumigant from the injection device before it is lifted or removed from the soil.~~

~~NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.~~

Readopt section 6450 to read:

6450. Chloropicrin and Methyl Bromide-Field Fumigation.

The provisions of this section and sections 6450.1, 6450.2, 6450.3, and 6784(b) pertain to field soil fumigation use requirements using methyl bromide, singly or in combination with chloropicrin or any other pesticide or warning agent. For purposes of these sections, field soil fumigation does not apply to golf courses, tree holes, potting soil, raised-tarpaulin nursery fumigations of less than one acre, and greenhouses and other similar structures.

(a) Notwithstanding section 6428, the operator of the property to be treated shall submit a proposed worksite plan to the commissioner for evaluation at least 7 days prior to submitting a notice of intent. The proposed worksite plan shall include, but is not limited to, method of application to be used, acreage and identification of each application block to be treated, application rate to be used, description of the notification procedure to property operators pursuant to section 6450.1(b), description of any activities within the buffer zone(s) as specified in section 6450.2(e) and (f), and if applicable, description of the tarpaulin repair response plan, and tarpaulin removal. The commissioner shall retain the proposed worksite plan for one year after the expiration of the permit.

(b) The commissioner, pursuant to section 6432, shall evaluate local conditions and the proposed worksite plan.

(c) The commissioner shall include at least the following when conditioning a permit: the buffer zone requirements, work hour restrictions, notification requirements, any other restrictions to address local conditions, and if applicable, description of the tarpaulin repair response plan and tarpaulin removal. The commissioner shall complete the evaluation and complete conditioning the permit prior to the submission of the notice of intent.

(d) An application block shall not exceed 40 acres.

(e) Tarpaulins shall have a permeability factor between 5 and 8 milliliters methyl bromide per hour, per square meter, per 1,000 parts per million of methyl bromide under the tarpaulin at 30 degrees Celsius, and be approved by the Department. A list of approved tarpaulins is available from the Department.

(f) Tarpaulins shall be buried under at least four inches of firmly packed soil at the end of the rows. The tarpaulins shall remain in place for the time specified in section 6450.3.

(g) Fumigation equipment shall be operated to eliminate pesticide drip by clearing the fumigant from the injection device before it is lifted or removed from the soil.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.

Repeal section 6450.1:

~~**6450.1. Methyl Bromide Field Fumigation Notification Requirements.**~~

~~(a) Notification to the Commissioner.~~

~~(1) Notwithstanding section 6434, the operator of the property to be treated shall assure that the commissioner is notified (notice of intent) at least 48 hours prior to commencing fumigation. The notice of intent shall indicate the hour the fumigation is intended to commence and the information specified in section 6434(b).~~

~~(2) The fumigation shall not commence sooner than the intended starting time or later than 12 hours after the intended starting time specified on the notice of intent.~~

~~(3) If fumigation of an application block does not commence within the time specified in (a)(2), a new notice of intent must be submitted but no 48 hour waiting period is needed unless required by the commissioner.~~

~~(4) For multiple application blocks to be fumigated sequentially, the commissioner may allow one notice of intent that includes an application schedule for all the application blocks in lieu of a separate notice of intent for each application block to be fumigated. The schedule must specify the date and time each application block is intended to be fumigated.~~

~~(b) Notification to Property Operators.~~

~~(1) The operator of the property to be treated shall assure that operators of the following properties within 300 feet from the perimeter of the outer buffer zone receive notification that a permit to use methyl bromide near their property has been issued by the commissioner: properties that contain schools, residences, hospitals, convalescent homes, onsite employee housing, or other similar sites identified by the commissioner. Notification shall be in writing, or by other means approved by the commissioner. The operator of the property to be treated shall assure that notification is delivered at least seven (7) days prior to the submission of the notice of intent. The notification shall include the following information:~~

~~(A) the name of the chemical(s) to be applied;~~

~~(B) name, business address, and business telephone number of the operator of the property to be treated;~~

~~(C) name, business address, and business telephone number of the commissioner;~~

~~(D) the earliest and latest dates that the fumigation will start; and~~

~~(E) how to request subsequent notification of specific date and time of the fumigation.~~

~~(2) The operator of the property to be treated shall assure that specific notification of the date and time of the start of the fumigation and anticipated expiration of buffer zones is provided to those persons notified in (b)(1) who request specific fumigation information. This specific fumigation notification shall be provided at least 48 hours prior to starting the fumigation. If a request for specific notification is received after the submission of the notice of intent and before the fumigation begins, the specific fumigation notification shall be provided prior to starting the fumigation, but the 48 hour requirement shall not apply. If the fumigation of an application block does not commence within the time frame specified in (a)(2), then a new notification must be provided to those persons who requested the information, but the 48 hour requirement shall not apply unless required by the commissioner.~~

~~NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.~~

Readopt section 6450.1 to read:

6450.1. Methyl Bromide Field Fumigation Notification Requirements.

(a) Notification to the Commissioner.

(1) Notwithstanding section 6434, the operator of the property to be treated shall assure that the commissioner is notified (notice of intent) at least 48 hours prior to commencing fumigation. The

notice of intent shall indicate the hour the fumigation is intended to commence and the information specified in section 6434(b).

(2) The fumigation shall not commence sooner than the intended starting time or later than 12 hours after the intended starting time specified on the notice of intent.

(3) If fumigation of an application block does not commence within the time specified in (a)(2), a new notice of intent must be submitted but no 48 hour waiting period is needed unless required by the commissioner.

(4) For multiple application blocks to be fumigated sequentially, the commissioner may allow one notice of intent that includes an application schedule for all the application blocks in lieu of a separate notice of intent for each application block to be fumigated. The schedule must specify the date and time each application block is intended to be fumigated.

(b) Notification to Property Operators.

(1) The operator of the property to be treated shall assure that operators of the following properties within 300 feet from the perimeter of the outer buffer zone receive notification that a permit to use methyl bromide near their property has been issued by the commissioner: properties that contain schools, residences, hospitals, convalescent homes, onsite employee housing, or other similar sites identified by the commissioner. Notification shall be in writing, or by other means approved by the commissioner. The operator of the property to be treated shall assure that notification is delivered at least seven (7) days prior to the submission of the notice of intent. The notification shall include the following information:

(A) the name of the chemical(s) to be applied;

(B) name, business address, and business telephone number of the operator of the property to be treated;

(C) name, business address, and business telephone number of the commissioner;

(D) the earliest and latest dates that the fumigation will start; and

(E) how to request subsequent notification of specific date and time of the fumigation.

(2) The operator of the property to be treated shall assure that specific notification of the date and time of the start of the fumigation and anticipated expiration of buffer zones is provided to those persons notified in (b)(1) who request specific fumigation information. This specific fumigation notification shall be provided at least 48 hours prior to starting the fumigation. If a request for specific notification is received after the submission of the notice of intent and before the fumigation begins, the specific fumigation notification shall be provided prior to starting the fumigation, but the 48-hour requirement shall not apply. If the fumigation of an application block does not commence within the time frame specified in (a)(2), then a new notification must be provided to those persons who requested the information, but the 48-hour requirement shall not apply unless required by the commissioner.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.

Repeal section 6450.2:

~~**6450.2. Methyl Bromide Field Fumigation Buffer Zone Requirements.**~~

~~(a) The commissioner shall approve buffer zone sizes and durations based upon local conditions.~~

~~(b) The operator of the property to be treated shall assure that all buffer zone distances are measured from the perimeter of the application block.~~

~~(c) The buffer zone restrictions shall begin at the start of fumigation. The buffer zone restrictions shall remain in effect for at least 36 hours after the completion of the injection to the application block.~~

~~(d) Two buffer zones, an inner and outer for each application block, shall be approved by the commissioner after the proposed worksite plan is submitted.~~

~~(e) Inner Buffer Zone Restrictions.~~

~~(1) The inner buffer zone shall be at least 50 feet.~~

~~(2) The operator of the property to be treated shall assure that no persons are allowed within the inner buffer zone except to transit and perform fumigation handling activities.~~

(3) ~~The inner buffer zone shall not extend into adjoining property except as provided below:~~

~~(A) The inner buffer zone may extend into adjoining agricultural property if the adjoining property operator gives written permission and allows the operator of the property to be treated to post the inner buffer zone boundary on the adjoining property with signs. If such written permission is given, the operator of the property to be treated shall assure that:~~

~~1. the inner buffer zone boundaries on the adjoining property are posted with signs while the buffer zone is in effect; and~~

~~2. the signs are posted so that the wording is clearly visible, to persons with normal vision, from a distance of 25 feet and shall contain the following words: "METHYL BROMIDE INNER BUFFER ZONE" and "KEEP OUT" and "NO ENTRE"; and~~

~~3. the signs are posted at intervals not exceeding 200 feet.~~

~~(B) With approval from the commissioner, the inner buffer zone may extend across sites only where transit activities may occur, including streets, roads, roads within agricultural property, highways, and other similar means of travel. Written permission and posting requirements in 6450.2(e)(3)(A) shall not apply.~~

~~(f) Outer Buffer Zone Restrictions.~~

~~(1) The outer buffer zone shall be at least 60 feet.~~

~~(2) The operator of the property to be treated shall assure that no persons are allowed within the outer buffer zone except to transit, perform fumigation handling activities, and commissioner-approved activities as identified in the restricted materials permit conditions. In no instance shall persons be allowed within the outer buffer zone for more than 12 hours in a 24-hour period.~~

~~(3) The outer buffer zone may extend into other properties with permission from the operators of these other properties. In no instances shall the outer buffer zone contain occupied residences or occupied onsite employee housing while the outer buffer zone is in effect. The outer buffer zone shall not extend into properties that contain schools, convalescent homes, hospitals, or other similar sites identified by the commissioner.~~

~~(4) The outer buffer zone may extend across roads, highways, or similar means of travel or sites approved by the commissioner.~~

~~(g) The operator of the other properties specified in (e)(3)(A) and (f)(3) above, shall notify the following persons that a buffer zone(s) has been established on the property: onsite employees, including those of a licensed pest control business or farm labor contractor. The notice to employees shall be given prior to the commencement of the employee's work activity. Notification to farm labor contractor employees may be done by giving written notice to the farm labor contractor who shall then give the notice to the employee. Employee notification shall include information required in section 6450.1(b)(2).~~

~~(h) If the operator of the other property is required to notify his/her employees as specified in (g), then the operator of the property to be treated shall assure that specific notification of the date and time of the start of the fumigation and anticipated expiration of buffer zones is provided to the other property operator. This specific fumigation notification shall be provided to the other property operator at least 48 hours prior to starting the fumigation. If the fumigation of an application block does not commence within the time frame specified in (a)(2), then a new notification must be provided to the other property operator specified in (e)(3)(A) and (f)(3), but the 48 hour requirement shall not apply unless required by the commissioner.~~

~~(i) When a school property is within 300 feet of the perimeter of the outer buffer zone, the injection shall be completed 36 hours prior to the start of a school session. School session shall be those times when students are attending scheduled classes.~~

~~NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.~~

Readopt section 6450.2 to read:

6450.2. Methyl Bromide Field Fumigation Buffer Zone Requirements.

(a) The commissioner shall approve buffer zone sizes and durations based upon local conditions.

(b) The operator of the property to be treated shall assure that all buffer zone distances are measured from the perimeter of the application block.

(c) The buffer zone restrictions shall begin at the start of fumigation. The buffer zone restrictions shall remain in effect for at least 36 hours after the completion of the injection to the application block.

(d) Two buffer zones, an inner and outer for each application block, shall be approved by the commissioner after the proposed worksite plan is submitted.

(e) Inner Buffer Zone Restrictions.

(1) The inner buffer zone shall be at least 50 feet.

(2) The operator of the property to be treated shall assure that no persons are allowed within the inner buffer zone except to transit and perform fumigation handling activities.

(3) The inner buffer zone shall not extend into adjoining property except as provided below:

(A) The inner buffer zone may extend into adjoining agricultural property if the adjoining property operator gives written permission and allows the operator of the property to be treated to post the inner buffer zone boundary on the adjoining property with signs. If such written permission is given, the operator of the property to be treated shall assure that:

1. the inner buffer zone boundaries on the adjoining property are posted with signs while the buffer zone is in effect; and

2. the signs are posted so that the wording is clearly visible, to persons with normal vision, from a distance of 25 feet and shall contain the following words: "METHYL BROMIDE INNER BUFFER ZONE" and "KEEP OUT" and "NO ENTRE"; and

3. the signs are posted at intervals not exceeding 200 feet.

(B) With approval from the commissioner, the inner buffer zone may extend across sites only where transit activities may occur, including streets, roads, roads within agricultural property, highways, and other similar means of travel. Written permission and posting requirements in 6450.2(e)(3)(A) shall not apply.

(f) Outer Buffer Zone Restrictions.

(1) The outer buffer zone shall be at least 60 feet.

(2) The operator of the property to be treated shall assure that no persons are allowed within the outer buffer zone except to transit, perform fumigation handling activities, and commissioner-approved activities as identified in the restricted materials permit conditions. In no instance shall persons be allowed within the outer buffer zone for more than 12 hours in a 24-hour period.

(3) The outer buffer zone may extend into other properties with permission from the operators of these other properties. In no instances shall the outer buffer zone contain occupied residences or occupied onsite employee housing while the outer buffer zone is in effect. The outer buffer zone shall not extend into properties that contain schools, convalescent homes, hospitals, or other similar sites identified by the commissioner.

(4) The outer buffer zone may extend across roads, highways, or similar means of travel or sites approved by the commissioner.

(g) The operator of the other properties specified in (e)(3)(A) and (f)(3) above, shall notify the following persons that a buffer zone(s) has been established on the property: onsite employees, including those of a licensed pest control business or farm labor contractor. The notice to employees shall be given prior to the commencement of the employee's work activity. Notification to farm labor contractor employees may be done by giving written notice to the farm labor contractor who shall then give the notice to the employee. Employee notification shall include information required in section 6450.1(b)(2).

(h) If the operator of the other property is required to notify his/her employees as specified in (g), then the operator of the property to be treated shall assure that specific notification of the date and time of the start of the fumigation and anticipated expiration of buffer zones is provided to the other property operator. This specific fumigation notification shall be provided to the other property operator at least 48 hours prior to starting the fumigation. If the fumigation of an application block does not commence within the time frame specified in (a)(2), then a new notification must be provided to the other property operator specified in (e)(3)(A) and (f)(3), but the 48-hour requirement shall not apply unless required by the commissioner.

(i) When a school property is within 300 feet of the perimeter of the outer buffer zone, the injection shall be completed 36 hours prior to the start of a school session. School session shall be those times when students are attending scheduled classes.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.

Repeal section 6450.3:

~~**6450.3. Methyl Bromide Field Fumigation Methods.**~~

~~(a) The fumigation shall be made only in accordance with the following restrictions, except for experimental research purposes pursuant to a valid research authorization issued according to section 6260.~~

~~(1) Nontarpaulin/Shallow/Bed~~

~~(A) Application rate shall not exceed 200 pounds of methyl bromide per acre.~~

~~(B) The application tractor shall be equipped with an air fan dilution system.~~

~~(C) Rearward-curved (swept-back) chisels shall be used with:~~

~~1. closing shoes and bed-shaper, or closing shoes and compaction roller; and~~

~~2. chisel injection points positioned beneath and ahead of the closing shoes.~~

~~(D) Injection depth shall be between 10 and 15 inches. The injection depth to preformed beds must not be below the bed furrow.~~

~~(E) Injection spacing shall be 40 inches or less.~~

~~(F) The soil shall not be disturbed for at least 3 days (72 hours) following completion of injection to the application block.~~

~~(G) The application block restricted entry interval shall be 3 days.~~

~~(2) Nontarpaulin/Deep/Broadcast~~

~~(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.~~

~~(B) Forward-curved chisel shall be used with:~~

~~1. An application tractor equipped with an air fan dilution system and the injection depth shall be at least 20 inches; or~~

~~2. Closing shoes and compaction roller and the injection depth shall be at least 24 inches.~~

~~(C) Injection spacing shall be 68 inches or less.~~

~~(D) The soil shall not be disturbed for at least 4 days (96 hours) following completion of injection to the application block.~~

~~(E) The application block restricted entry interval shall be 4 days.~~

~~(3) Tarpaulin/Shallow/Broadcast~~

~~(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.~~

~~(B) Application shall be made using either:~~

~~1. An application tractor equipped with an air fan dilution system, and with a plow consisting of horizontal v-shaped blades mounted by a vertical arm to the tool bar. The fumigant shall be injected laterally beneath the soil surface; or~~

~~2. Rearward-curved (swept-back) chisels, closing shoes, and compaction roller shall be used.~~

~~(C) Injection depth shall be between 10 and 15 inches.~~

~~(D) Injection spacing shall be 12 inches or less.~~

~~(E) The tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.~~

~~(F) The tarpaulin shall not be cut until a minimum of 5 days (120 hours) following completion of injection to the application block. The tarpaulin shall be cut pursuant to section 6784(b)(5).~~

~~(G) Tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.~~

~~(H) The application block restricted entry interval shall end at completion of tarpaulin removal, and shall be at least 6 days.~~

~~(4) Tarpaulin/Shallow/Bed~~

(A) Application rate shall not exceed 250 pounds of methyl bromide per acre.

(B) Rearward-curved (swept back) chisels shall be used with either:

1. Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or

2. Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or

3. Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.

(C) Injection depth shall be between 6 and 15 inches. The injection depth to preformed beds must not be below the bed furrow.

(D) Injection spacing shall be 12 inches or less.

(E) The tarpaulin shall not be cut until at least 5 days (120 hours) following completion of injection to the application block.

(F) If tarpaulins are removed before planting, tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed. The application block restricted entry interval shall end at completion of tarpaulin removal, and shall be at least 6 days.

(G) If tarpaulins are not to be removed before planting, the application block restricted entry interval shall either:

1. consist of the 5-day period described in subsection (E) plus an additional 48 hours after holes have been cut for planting, or

2. be at least 14 days. If this option is chosen, the methyl bromide air concentration underneath the tarpaulin must test less than 5 parts per million before planting begins.

(5) Tarpaulin/Deep/Broadcast

(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.

(B) Forward-curved chisels shall be used with either:

1. An air fan dilution system on the application tractor; or

2. Closing shoes and compaction roller.

(C) Injection depth shall be at least 20 inches.

(D) Injection spacing shall be 66 inches or less.

(E) The tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.

(F) The tarpaulin shall not be cut until at least 5 days (120 hours) following completion of injection to the application block. The tarpaulin shall be cut pursuant to section 6784(b)(5).

(G) Tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.

(H) The application block restricted entry interval shall end at completion of tarpaulin removal, and shall be at least 6 days.

(6) Drip System – Hot Gas A hot gas application through a subsurface drip irrigation system to tarpaulin-covered beds may be used if all of the following criteria are met:

(A) Application rate shall not exceed 225 pounds of methyl bromide per acre.

(B) The fumigant shall be injected beneath the soil surface at a minimum depth of one inch.

~~(C) The portion of the drip system used in the fumigation shall be physically is connected from the main water supply during the fumigation to prevent possible contamination of the water supply.~~

~~(D) All fittings and emitters underneath the tarpaulin shall be buried in the soil to a minimum depth of 1 inch.~~

~~(E) Prior to the start of the fumigation, all drip tubing shall be checked for blockage, and the irrigation system connections and fittings checked for blockage and leaks using pressurized air and/or water. The end of each drip tubing shall be placed under the tarpaulin prior to introduction of fumigant.~~

~~(F) The tarpaulin shall be placed and inspected for tears, holes, or improperly secured edges prior to fumigating. Repairs and adjustments shall be made before the fumigation begins.~~

~~(G) Prior to the start of the fumigation, all fittings above ground and outside of the tarpaulin shall be pressure tested with compressed air, water, or nitrogen gas to a maximum pressure of 50 pounds per square inch. A soap solution shall be used to check the fittings for leaks if using air or nitrogen. All apparent leaks shall be eliminated prior to the fumigation. All drip tubing with emitters connected to the distribution manifold not covered by the tarpaulin shall be sealed to prevent fumigant loss through the emitters.~~

~~(H) Prior to introducing the fumigant, the drip system shall be purged of water by means of pressurized gas such as CO2 or nitrogen.~~

~~(I) The drip system shall be purged prior to disconnecting any line containing the fumigant.~~

~~(J) After purging, drip tubing shall be pinched off and then disconnected from the distribution manifold. All disconnected tubing leading into the treated field shall be secured to prevent gas from escaping.~~

~~(K) All fittings used for connecting or disconnecting the heat exchanger to the irrigation system manifold shall be of a positive shut-off design.~~

~~(L) All persons shall wear the eye protection specified on the label when working with a manifold system or tubing containing the fumigant under pressure.~~

~~(M) The entire fumigation system (heater, valves, and manifold) shall be purged of the fumigant at the end of each day's fumigation.~~

~~(N) The tarpaulin shall not be cut until at least 5 days (120 hours) following completion of injection to the application block.~~

~~(O) If tarpaulins are removed before planting, tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed. The application block restricted entry interval shall end at completion of tarpaulin removal and shall be at least 6 days.~~

~~(P) If tarpaulins are not to be removed before planting, the application block restricted entry interval shall either:~~

~~1. consist of the 5-day period described in subsection (N) plus an additional 48 hours after holes have been cut for planting, or~~

~~2. be at least 14 days. If this option is chosen, the methyl bromide air concentration underneath the tarpaulin must test less than 5 parts per million before planting begins.~~

~~NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.~~

Readopt section 6450.3 to read:

6450.3. Methyl Bromide Field Fumigation Methods.

(a) The fumigation shall be made only in accordance with the following restrictions, except for experimental research purposes pursuant to a valid research authorization issued according to section 6260.

(1) Nontarpaulin/Shallow/Bed

(A) Application rate shall not exceed 200 pounds of methyl bromide per acre.

(B) The application tractor shall be equipped with an air fan dilution system.

(C) Rearward-curved (swept-back) chisels shall be used with:

1. closing shoes and bed-shaper, or closing shoes and compaction roller; and

2. chisel injection points positioned beneath and ahead of the closing shoes.

(D) Injection depth shall be between 10 and 15 inches. The injection depth to preformed beds must not be below the bed furrow.

(E) Injection spacing shall be 40 inches or less.

(F) The soil shall not be disturbed for at least 3 days (72 hours) following completion of injection to the application block.

(G) The application block restricted entry interval shall be 3 days.

(2) Nontarpaulin/Deep/Broadcast

(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.

(B) Forward-curved chisel shall be used with:

1. An application tractor equipped with an air fan dilution system and the injection depth shall be at least 20 inches; or

2. Closing shoes and compaction roller and the injection depth shall be at least 24 inches.

(C) Injection spacing shall be 68 inches or less.

(D) The soil shall not be disturbed for at least 4 days (96 hours) following completion of injection to the application block.

(E) The application block restricted entry interval shall be 4 days.

(3) Tarpaulin/Shallow/Broadcast

(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.

(B) Application shall be made using either:

1. An application tractor equipped with an air fan dilution system, and with a plow consisting of horizontal v-shaped blades mounted by a vertical arm to the tool bar. The fumigant shall be injected laterally beneath the soil surface; or

2. Rearward-curved (swept-back) chisels, closing shoes, and compaction roller shall be used.

(C) Injection depth shall be between 10 and 15 inches.

(D) Injection spacing shall be 12 inches or less.

(E) The tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.

(F) The tarpaulin shall not be cut until a minimum of 5 days (120 hours) following completion of injection to the application block. The tarpaulin shall be cut pursuant to section 6784(b)(5).

(G) Tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.

(H) The application block restricted entry interval shall end at completion of tarpaulin removal, and shall be at least 6 days.

(4) Tarpaulin/Shallow/Bed

(A) Application rate shall not exceed 250 pounds of methyl bromide per acre.

(B) Rearward-curved (swept-back) chisels shall be used with either:

1. Closing shoes and compaction roller. The closing shoes shall cover the chisel marks with soil just ahead of the compaction roller, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or

2. Bed shaper. The chisels shall be placed with the injection point under the bed shaper, and the tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor; or

3. Combination bed former and bed shaper. The chisels shall be placed between the bed former and the bed shaper. The tractor with the tarpaulin-laying equipment shall immediately follow the application tractor.

(C) Injection depth shall be between 6 and 15 inches. The injection depth to preformed beds must not be below the bed furrow.

(D) Injection spacing shall be 12 inches or less.

(E) The tarpaulin shall not be cut until at least 5 days (120 hours) following completion of injection to the application block.

(F) If tarpaulins are removed before planting, tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed. The application block restricted entry interval shall end at completion of tarpaulin removal, and shall be at least 6 days.

(G) If tarpaulins are not to be removed before planting, the application block restricted entry interval shall either:

1. consist of the 5-day period described in subsection (E) plus an additional 48 hours after holes have been cut for planting, or

2. be at least 14 days. If this option is chosen, the methyl bromide air concentration underneath the tarpaulin must test less than 5 parts per million before planting begins.

(5) Tarpaulin/Deep/Broadcast

(A) Application rate shall not exceed 400 pounds of methyl bromide per acre.

(B) Forward-curved chisels shall be used with either:

1. An air fan dilution system on the application tractor; or

2. Closing shoes and compaction roller.

(C) Injection depth shall be at least 20 inches.

(D) Injection spacing shall be 66 inches or less.

(E) The tarpaulin shall be laid down simultaneously (with fumigant injection) by tarpaulin-laying equipment mounted on the application tractor.

(F) The tarpaulin shall not be cut until at least 5 days (120 hours) following completion of injection to the application block. The tarpaulin shall be cut pursuant to section 6784(b)(5).

(G) Tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed.

(H) The application block restricted entry interval shall end at completion of tarpaulin removal, and shall be at least 6 days.

(6) Drip System - Hot Gas A hot gas application through a subsurface drip irrigation system to tarpaulin-covered beds may be used if all of the following criteria are met:

(A) Application rate shall not exceed 225 pounds of methyl bromide per acre.

(B) The fumigant shall be injected beneath the soil surface at a minimum depth of one inch.

(C) The portion of the drip system used in the fumigation shall be physically is connected from the main water supply during the fumigation to prevent possible contamination of the water supply.

(D) All fittings and emitters underneath the tarpaulin shall be buried in the soil to a minimum depth of 1 inch.

(E) Prior to the start of the fumigation, all drip tubing shall be checked for blockage, and the irrigation system connections and fittings checked for blockage and leaks using pressurized air and/or water. The end of each drip tubing shall be placed under the tarpaulin prior to introduction of fumigant.

(F) The tarpaulin shall be placed and inspected for tears, holes, or improperly secured edges prior to fumigating. Repairs and adjustments shall be made before the fumigation begins.

(G) Prior to the start of the fumigation, all fittings above ground and outside of the tarpaulin shall be pressure tested with compressed air, water, or nitrogen gas to a maximum pressure of 50 pounds per square inch. A soap solution shall be used to check the fittings for leaks if using air or nitrogen. All apparent leaks shall be eliminated prior to the fumigation. All drip tubing with emitters connected to the distribution manifold not covered by the tarpaulin shall be sealed to prevent fumigant loss through the emitters.

(H) Prior to introducing the fumigant, the drip system shall be purged of water by means of pressurized gas such as CO2 or nitrogen.

(I) The drip system shall be purged prior to disconnecting any line containing the fumigant.

(J) After purging, drip tubing shall be pinched off and then disconnected from the distribution manifold. All disconnected tubing leading into the treated field shall be secured to prevent gas from escaping.

(K) All fittings used for connecting or disconnecting the heat exchanger to the irrigation system manifold shall be of a positive shut-off design.

(L) All persons shall wear the eye protection specified on the label when working with a manifold system or tubing containing the fumigant under pressure.

(M) The entire fumigation system (heater, valves, and manifold) shall be purged of the fumigant at the end of each day's fumigation.

(N) The tarpaulin shall not be cut until at least 5 days (120 hours) following completion of injection to the application block.

(O) If tarpaulins are removed before planting, tarpaulin removal shall begin no sooner than 24 hours after tarpaulin cutting has been completed. The application block restricted entry interval shall end at completion of tarpaulin removal and shall be at least 6 days.

(P) If tarpaulins are not to be removed before planting, the application block restricted entry interval shall either:

1. consist of the 5-day period described in subsection (N) plus an additional 48 hours after holes have been cut for planting, or

2. be at least 14 days. If this option is chosen, the methyl bromide air concentration underneath the tarpaulin must test less than 5 parts per million before planting begins.

NOTE: Authority cited: Sections 11456, 12976, 12981, 14005 and 14102, Food and Agricultural Code. Reference: Sections 11501, 12981, 14006 and 14102, Food and Agricultural Code.

Repeal section 6784(b):

6784. Field Fumigation.

(a) Signs shall be posted in accordance with section 6776(f) and shall remain in place until aeration is complete.

~~(b) The provisions of this subsection pertain to field soil fumigations using methyl bromide, singly or in combination with chloropicrin or any other pesticide or warning agent, applied pursuant to the fumigation methods described in section 6450.3.~~

~~(1) For purposes of this subsection, fumigation handling activities includes an employee involved in assisting with covering the tarpaulin at the end of the rows (shoveling); observing the overall operation, checking tarpaulin placement, changing cylinders (copiloting); operating application equipment (driving); and tarpaulin cutting and removal.~~

~~(2) Employer Recordkeeping. The employer shall maintain records for all employees involved in application, tarpaulin cutting, tarpaulin repair, and tarpaulin removal activities. The records shall identify the person, work activity(ies), date(s), duration of handling, the U.S. Environmental Protection Agency Registration Number, and the brand name of the methyl bromide product handled. The employer shall maintain these use records at a central location for two years and the records shall be made available to the commissioner upon request.~~

~~(3) Employee Protection Requirements for Fumigation Handlers.~~

~~(A) Employees involved primarily in shoveling shall work only at the ends of the application rows.~~

~~(B) Whenever methyl bromide, singly or in combination with chloropicrin or any other pesticide or warning agent, is used for field soil fumigation, at least two trained employees shall be present during introduction of the fumigant and removal of tarpaulins, if used.~~

~~(4) Limited Work Hours.~~

~~(A) Multiple Task Employees. An employee may work in more than one work task and/or application method in a 24-hour period as long as the employee's total work hours do not exceed the lowest total hours specified in Table 1 – Maximum Work Hours for any one work task or application method performed, except as provided in section 6784(b)(7).~~

~~(B) Fumigation Handling Activities. No employee may work in fumigation handling activities more than the hours specified in Table 1 – Maximum Work Hours, in a 24-hour period, during the injection period and during the restricted entry interval, except as provided in section 6784(b)(7).~~

~~Table 1. Maximum Work Hours~~

~~Fumigation Method/Activities~~	~~Maximum Application Rate~~	~~Maximum Work Hours in a 24-Hour Period~~
~~Nontarpaulin/Shallow/Bed Application Equipment Driving~~	~~200 lbs.~~	~~4*~~

Nontarpaulin/Deep/Broadcast Application Equipment Driving	400 lbs.	4*
Tarpaulin/Shallow/Broadcast Application Equipment Driving Shoveling, Copiloting Tarpaulin Cutting Tarpaulin Removal	400 lbs.	4* 3* 4 7
Tarpaulin/Shallow/Bed Application Equipment Driving Shoveling, Copiloting Tarpaulin Cutting Tarpaulin Removal	250 lbs.	4* 4* 4 7
Tarpaulin/Deep/Broadcast Application Equipment Driving Shoveling, Copiloting Tarpaulin Cutting Tarpaulin Removal	400 lbs.	4* 3* 4 7
Drip System - Hot Gas Applicators Tarpaulin Cutting Tarpaulin Removal	225 lbs.	2* 4 7

*If the actual methyl bromide application rate is less than the maximum application rate shown in the table above for the particular fumigation method used, the maximum work hours may be increased in accordance with the following formula:

$$\left(\frac{\text{maximum application rate for method}}{\text{actual application rate}}\right) \times \text{maximum work hours in a 24 hour period} = \text{revised maximum work hours in a 24 hour period}$$

(5) Tarpaulin Cutting and Removal Procedures

(A) Tarpaulin cutting and tarpaulin removal shall be discontinued if the presence of gas is readily evident (onset of eye irritation or odor).

(B) Tarpaulins used for broadcast fumigations shall be cut using only mechanical methods (all-terrain vehicle or a tractor with a cutting wheel). Each tarpaulin panel used for broadcast fumigations shall be cut lengthwise.

(6) Tarpaulin Repair.

(A) The operator of the property shall assure that a "tarpaulin repair response plan" is provided to the commissioner. The tarpaulin repair response plan shall identify the responsibilities of the licensed pest control business and/or the permittee with regard to tarpaulin damage detection and

~~repair activities. At a minimum, the tarpaulin repair response plan shall indicate the parties responsible for the repair and incorporate the applicable elements listed in (B) below.~~

~~(B) The "tarpaulin repair response plan" approved by the commissioner in the worksite plan must state with specificity the situations when tarpaulin repair must be conducted. The situations should be based on, but not limited to, hazard to the public, residents or workers; proximity to occupied structures, size of the damaged area(s); timing of damage; feasibility of repair; and environmental factors such as wind speed and direction.~~

~~(C) The ambient air in the damaged areas of the tarpaulin to be repaired must be tested for methyl bromide concentration by a certified applicator of the licensed pest control business that made the application, or by a certified applicator employee of the permittee, or certified applicator permittee, using a testing device as specified by the labeling. The certified applicator must wear self-contained breathing apparatus (SCBA) when conducting these tests.~~

~~(D) All repair work areas must test less than 5 parts per million methyl bromide before any employee without respiratory protection shall be allowed to enter and conduct tarpaulin repair. Such employee is limited to one (1) work hour in a 24-hour period, except as provided in section 6784(b)(7).~~

(7) ~~Maximum Work Hour Exemption.~~

~~Notwithstanding sections 6784(b)(4) and 6784(b)(6)(D), maximum fumigation handlers work hour restrictions shall not apply if:~~

~~(A) fumigation handlers wear National Institute for Occupational Safety and Health (NIOSH) certified respiratory protection specifically recommended by the manufacturer for use in atmospheres containing less than 5 parts per million methyl bromide; and~~

~~(B) the NIOSH certified respiratory protection is worn for the entire duration of the fumigation handling activities.~~

NOTE: Authority cited: Sections 11456 and 12981, Food and Agricultural Code. Reference: Section 12981, Food and Agricultural Code.

Readopt section 6784(b) to read:

6784. Field Fumigation.

(a) Signs shall be posted in accordance with section 6776(f) and shall remain in place until aeration is complete.

(b) The provisions of this subsection pertain to field soil fumigations using methyl bromide, singly or in combination with chloropicrin or any other pesticide or warning agent, applied pursuant to the fumigation methods described in section 6450.3.

(1) For purposes of this subsection, fumigation handling activities includes an employee involved in assisting with covering the tarpaulin at the end of the rows (shoveling); observing the overall operation, checking tarpaulin placement, changing cylinders (copiloting); operating application equipment (driving); and tarpaulin cutting and removal.

(2) Employer Recordkeeping. The employer shall maintain records for all employees involved in application, tarpaulin cutting, tarpaulin repair, and tarpaulin removal activities. The records shall identify the person, work activity(ies), date(s), duration of handling, the U.S. Environmental Protection Agency Registration Number, and the brand name of the methyl

bromide product handled. The employer shall maintain these use records at a central location for two years and the records shall be made available to the commissioner upon request.

(3) Employee Protection Requirements for Fumigation Handlers.

(A) Employees involved primarily in shoveling shall work only at the ends of the application rows.

(B) Whenever methyl bromide, singly or in combination with chloropicrin or any other pesticide or warning agent, is used for field soil fumigation, at least two trained employees shall be present during introduction of the fumigant and removal of tarpaulins, if used.

(4) Limited Work Hours.

(A) Multiple Task Employees. An employee may work in more than one work task and/or application method in a 24-hour period as long as the employee's total work hours do not exceed the lowest total hours specified in Table 1 – Maximum Work Hours for any one work task or application method performed, except as provided in section 6784(b)(7).

(B) Fumigation Handling Activities. No employee may work in fumigation handling activities more than the hours specified in Table 1 – Maximum Work Hours, in a 24-hour period, during the injection period and during the restricted entry interval, except as provided in section 6784(b)(7).

Table 1. Maximum Work Hours

Fumigation Method/Activities	Maximum Application Rate	Maximum Work Hours in a 24-Hour Period
Nontarpaulin/Shallow/Bed Application Equipment Driving	200 lbs.	4*
Nontarpaulin/Deep/Broadcast Application Equipment Driving	400 lbs.	4*
Tarpaulin/Shallow/Broadcast Application Equipment Driving Shoveling, Copiloting Tarpaulin Cutting Tarpaulin Removal	400 lbs.	 4* 3* 4 7
Tarpaulin/Shallow/Bed Application Equipment Driving Shoveling, Copiloting Tarpaulin Cutting Tarpaulin Removal	250 lbs.	 4* 4* 4 7
Tarpaulin/Deep/Broadcast Application Equipment Driving Shoveling, Copiloting Tarpaulin Cutting Tarpaulin Removal	400 lbs.	 4* 3* 4 7

Drip System – Hot Gas Applicators Tarpaulin Cutting Tarpaulin Removal	225 lbs.	2* 4 7

*If the actual methyl bromide application rate is less than the maximum application rate shown in the table above for the particular fumigation method used, the maximum work hours may be increased in accordance with the following formula:

$$\left(\frac{\text{maximum application rate for method}}{\text{actual application rate}}\right) \times \text{maximum work hours in a 24-hour period} = \text{revised maximum work hours in a 24-hour period}$$

(5) Tarpaulin Cutting and Removal Procedures

(A) Tarpaulin cutting and tarpaulin removal shall be discontinued if the presence of gas is readily evident (onset of eye irritation or odor).

(B) Tarpaulins used for broadcast fumigations shall be cut using only mechanical methods (all-terrain vehicle or a tractor with a cutting wheel). Each tarpaulin panel used for broadcast fumigations shall be cut lengthwise.

(6) Tarpaulin Repair.

(A) The operator of the property shall assure that a "tarpaulin repair response plan" is provided to the commissioner. The tarpaulin repair response plan shall identify the responsibilities of the licensed pest control business and/or the permittee with regard to tarpaulin damage detection and repair activities. At a minimum, the tarpaulin repair response plan shall indicate the parties responsible for the repair and incorporate the applicable elements listed in (B) below.

(B) The "tarpaulin repair response plan" approved by the commissioner in the worksite plan must state with specificity the situations when tarpaulin repair must be conducted. The situations should be based on, but not limited to, hazard to the public, residents or workers; proximity to occupied structures, size of the damaged area(s); timing of damage; feasibility of repair; and environmental factors such as wind speed and direction.

(C) The ambient air in the damaged areas of the tarpaulin to be repaired must be tested for methyl bromide concentration by a certified applicator of the licensed pest control business that made the application, or by a certified applicator employee of the permittee, or certified applicator permittee, using a testing device as specified by the labeling. The certified applicator must wear self-contained breathing apparatus (SCBA) when conducting these tests.

(D) All repair work areas must test less than 5 parts per million methyl bromide before any employee without respiratory protection shall be allowed to enter and conduct tarpaulin repair. Such employee is limited to one (1) work hour in a 24-hour period, except as provided in section 6784(b)(7).

(7) Maximum Work Hour Exemption.

Notwithstanding sections 6784(b)(4) and 6784(b)(6)(D), maximum fumigation handlers work hour restrictions shall not apply if:

(A) fumigation handlers wear National Institute for Occupational Safety and Health (NIOSH) certified respiratory protection specifically recommended by the manufacturer for use in atmospheres containing less than 5 parts per million methyl bromide; and

(B) the NIOSH certified respiratory protection is worn for the entire duration of the fumigation handling activities.

NOTE: Authority cited: Sections 11456 and 12981, Food and Agricultural Code. Reference: Section 12981, Food and Agricultural Code.